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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

DOVE, T

ART UNIT

PAPER NUMBER

1745

DATE MAILED:

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05/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/381,295

Applicant(s)
Aihara et al.

Examiner
Tracy Dove

Art Unit
1745



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 Mar 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 14 Mar 2001 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

This Office Action is in response to the communication filed on 3/14/01. Applicant's arguments have been considered, but are not persuasive. Claims 1-13 and new claim 14 are rejected in view of the prior art of record. The proposed drawing change filed 3/14/01 is approved by the Examiner. This Action is made **FINAL**, as necessitated by amendment.

Specification

The objection to the specification contained in the Action of 12/15/00 has been withdrawn.

The amendment filed 3/14/01 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The deletion of subject matter is considered new matter, the deleted matter is as follows:

Paragraph beginning at page 10, line 5 "1 μm or greater" was deleted and "greater than 1 μm " was added. This amendment to the specification deletes the numerical value "1 μm " from the specification.

Paragraph beginning at page 36, line 13 "20 % or less" was changed to "less than 20 %". This amendment to the specification deletes the value "20%" from the specification. Similarly, "80% or more" was changed to "more than 80%".

Applicant is required to cancel the new matter in the reply to this Office action.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 1-7, 9, 10 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeuchi et al., US 6,096,456 "Takeuchi".

See Office Action of 12/15/00 for the reasons for rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamano et al., US 6,124,061 "Hamano" in view of Takeuchi et al., US 6,096,456 "Takeuchi".

See Office Action of 12/15/00 for the reasons for rejection.

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Response to Arguments

Applicant's arguments filed 3/14/01 have been fully considered but they are not persuasive.

Applicant argues that neither Hamano nor Takeuchi teach the limitation of claim 1 "an adhesive resin layer...joined directly to both of the positive and the negative electrodes". The battery of the instant invention includes an adhesive resin layer which is interposed in between the positive and negative electrode. The electrodes are directly bonded to the adhesive resin layer. In contrast both Takeuchi and Hamano both disclose batteries comprising the following five layer structure: positive electrode/adhesive/separator/adhesive/negative electrode.

Applicant's only argument is that the cited references fail to teach or suggest the three layer structure of the present invention (positive electrode/adhesive/negative electrode).

Before addressing the teachings of the cited prior art, the Examiner would like to clarify the terminology used in the instant invention and that of the cited prior art. The instant invention refers to an adhesive layer between the positive and negative electrodes. This adhesive layer could be termed a separator because it performs the function of separating the two electrodes of opposite polarity. In a significant number of the examples in the instant specification PVDF is used as the resin for the adhesive resin layer. Furthermore, claim 1 states that the adhesive resin layer includes "at least one layer".

Takeuchi teaches a thin film battery having a positive electrode, a separator and a negative electrode. See Fig. 1. The separator may be made of polyvinylidene fluoride (PVDF).

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See col. 14, lin 5-28. The separator of Takeuchi may be a composite film with a support. A particularly preferred support is alumina particles. See col. 18, lin 1-13. Therefore the “separator” of Takeuchi is the same as the “adhesive resin layer” of the instant invention.

Furthermore, since the invention states the adhesive resin layer is “at least one layer”, a five layer structure such as positive electrode/adhesive/separator/adhesive/negative electrode is encompassed by the instant claims.

Takeuchi teaches a method of laminating a positive electrode, a separator and a negative electrode to form a positive electrode/separator (adhesive layer)/negative electrode laminate with the separator being interposed between the positive and the negative electrodes as a battery constituting structure. See col. 22, lin 61-col. 23, lin 2.

The positive electrode/adhesive/separator/adhesive/negative electrode structure of Hamano still anticipates the claimed invention because claim 1 states the adhesive resin layer is “at least one layer”. The adhesive resin layer of the instant invention functions as the separator.

Thus Applicant’s argument that the cited references fail to teach or suggest the three layer structure of the present invention (positive electrode/adhesive/negative electrode) is not convincing.

Conclusion


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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached *Monday, Wednesday & Thursday from 7:30 AM - 7:00 PM*. My supervisor is Gabrielle Brouillette, who can be reached at (703) 308-0756. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax number is (703) 305-3599.

May 18, 2001


GABRIELLE BROUILLETTE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700